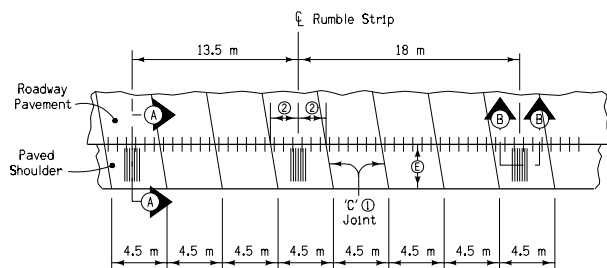


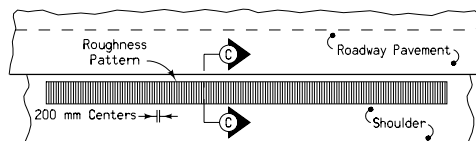
TYPICAL PLAN

P.C. Concrete Paved Shoulder Adjacent to Mainline with 6.0 meter Joint Spacing

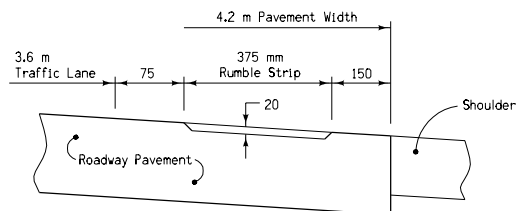


TYPICAL PLAN

P.C. Concrete Paved Shoulder Adjacent to Mainline with 4.5 meter Joint Spacing



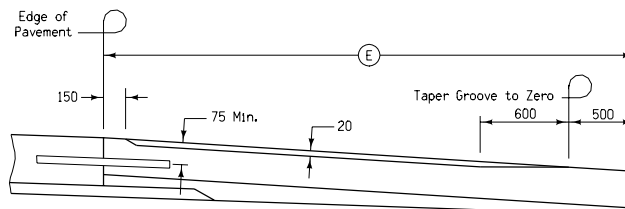
**TYPICAL PLAN
HOT MIX ASPHALT SHOULDERS**



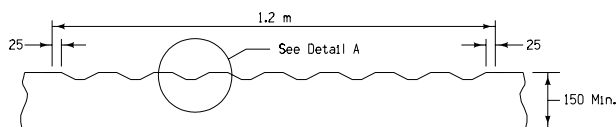
TYPICAL SECTION

Thru Pavement Edge 4.2 m Wide P.C.C. Pavement

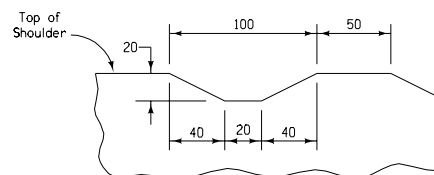
Use rumble strips and spacings shown in Typical Plans for P.C.C. Shoulders.



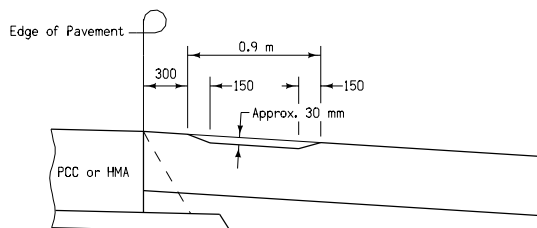
**SECTION A-A
Rumble Strip
P.C. CONCRETE SHOULDERS**



**SECTION B-B
P.C. CONCRETE SHOULDERS**



DETAIL A



**SECTION C-C
Rumble Strip
HOT MIX ASPHALT SHOULDERS**

GENERAL NOTES:

The rumble strip shown on this plan is typical and is required on all 4.2 m wide P.C.C. pavements and all paved shoulders. Alternate proposals will be considered for approval. Shoulders less than 1.8 meters wide will not be grooved.

RUMBLE STRIPS. On HMA shoulders, rumble strips shall be constructed by making indentations approximately 30 millimeter deep in the Hot Mix Asphalt surfacing.

The indentations shall be formed by rolling the Hot Mix Asphalt, while still hot, with a roller to which segments of 50 millimeters inside diameter pipe reinforced with proper size of reinforcing bar have been welded to the drum.

The pipe segments shall be 0.9 meters long, shall be cut longitudinally to provide a 40 percent segment and shall be beveled 150 millimeter at both ends. The pipe segments shall be welded to the roller drum at approximately 200 millimeter centers, with the rounded side of the pipe away from the drum.

The roller shall be equipped with a sighting device, enabling the operator to maintain alignment.

- ① "C" Joint in shoulder shall match the contraction joint in adjacent pavement.
- ② One-half joint spacing.

All dimensions given in millimeters unless noted.

M	Iowa Department of Transportation	
	Highway Division	
	STANDARD ROAD PLAN	RH-41D
	REVISION: Changed ACC to HMA	REVISION NO. 5
	APPROVED BY <i>William J. Sten</i> DESIGN METHODS ENGINEER	REVISION DATE 10-02-01
METRIC VERSION	RUMBLE STRIPS	